



BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

www.miamidade.gov

Eastern Metal Supply, Inc.
4268 Westroads Dr.
West Palm Beach, Florida 33407

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: 0.030" Galvanized Steel Storm Panels Shutter

APPROVAL DOCUMENT: Drawing No. 09-013, titled "0.030" Thick Galvanized Bertha Steel Storm Panel", sheets 1 through 9 of 9, and 1A of 9, prepared by Tilteco, Inc., dated 02/04/2009, last revision #1 dated 02/04/2009 signed and sealed by Walter A. Tillit Jr., P.E. on 02/18/2009, bearing Miami-Dade County Product Control revision stamp with the Notice of Acceptance number and expiration date by Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact

LABELING: Each panel shall bear a permanent label with the manufacturer's name or logo, city, state and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises & renews** NOA # 05-0926.02 and consists of this page 1, evidence submitted pages E-1, E-2 and E-3 as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



Helmy A. Makar
07/22/2009

NOA No. 09-0330.04
Expiration Date: 06/07/2014
Approval Date: 07/22/2009

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #00-0919.10

A. DRAWINGS

1. *Drawing No. 00-252, titled "24 Gage Galvanized Bertha Steel Storm Panels", prepared by Tilteco, Inc., dated July 10, 2000, last revision #1 dated April 3, 2001, sheets 1 through 9 of 9, signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test of Galvanized Steel Storm Panels, prepared by American Test Lab of South Florida, Report No. ATL 0425.01-00, dated August 22, 2000, signed and sealed by Henry Hattem, P.E. and William R. Mehner, P.E.*

C. CALCULATIONS

1. *Storm panel shutter Calculations, sheets 1 through 78 by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E., dated 09/11/2000.*

D. MATERIAL CERTIFICATIONS

- 1 *Mill Certified Inspection Report, dated 05/97, for Hot Dipped Galvanized coating G-60 Steel, ASTM A653 Grade 40 (ASTM 446GR-C) by Robert O'Neil of R & R Metals, Inc., with chemical composition and physical properties.*
2. *Tensile Test Reports from Hurricane Engineering & Testing Inc., Job No. HETI-97-T48 dated July 17, 1997 for 20 ga. Galvanized Steel, tested per ASTM E8-93, signed and sealed by Hector M. Medina, P.E.*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #02-0809.04

A. DRAWINGS

1. *Drawing No. 02-446, titled " 24 gage Galvanized Bertha Steel Storm Panel ", sheets 1 through 9 of 9, prepared by Tilteco, Inc., dated September 05, 2002, signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. MATERIAL CERTIFICATIONS

1. *None.*



**Helmy A. Makar, P.E., M.S.
Senior Product Control Examiner**

NOA No. 09-0330.04

Expiration Date: 06/07/2014

Approval Date: 07/22/2009

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 04-0517.01

A. DRAWINGS

1. *Drawing No. 02-446, titled " 24 gage Galvanized Bertha Steel Storm Panel ", sheets 1 through 9 of 9, prepared by Tilteco, Inc., dated September 05, 2002, signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *None.*

4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 05-0926.02

A. DRAWINGS

1. *Drawing No. 05-073, titled " 0.030" Thick Galvanized Bertha Steel Storm Panel", sheets 1 through 9 of 9, and 1A of 9, prepared by Tilteco, Inc., dated 04/25/2005, last revision #1 dated 04/25/2005 signed and sealed by Walter A. Tillit Jr., P.E. on 09/15/2005*

B. TESTS

1. *Test report on Large Missile Impact Test and Cyclic Wind Pressure Test of Galvanized Steel Storm Panels, prepared by American Test Lab of South Florida, Report No. ATLSF 0616.01-05, dated September 15, 2005, signed and sealed by William R. Mehner, P.E.*

C. CALCULATIONS

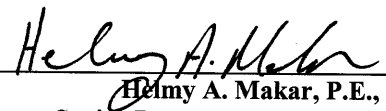
1. *Storm panel shutter Calculations, sheets 1 through 91 by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E. on 09/13/2005.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *Tensile Test Report from QC Metallurgical, Inc., Job No. 51M-926, dated September 20, 2005, tested per ASTM E8-93, signed and sealed by Frank Grate, P.E.*



Helmy A. Makar, P.E., M.S.
Senior Product Control Examiner
NOA No. 09-0330.04

Expiration Date: 06/07/2014

Approval Date: 07/22/2009

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

5. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 09-013, titled "0.030" Thick Galvanized Bertha Steel Storm Panel", sheets 1 through 9 of 9, and 1A of 9, prepared by Tilteco, Inc., dated 02/04/2009, last revision #1 dated 02/04/2009 signed and sealed by Walter A. Tillit Jr., P.E. on 02/18/2009.*

B. TESTS

1. *None.*

C. CALCULATIONS

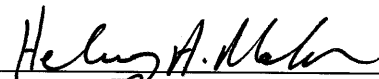
1. *Storm panel shutter Calculations, sheets 1 through 91 by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E. on 02/18/2009.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *None.*



Helmy A. Makar, P.E., M.S.
Senior Product Control Examiner
NOA No. 09-0330.04
Expiration Date: 06/07/2014
Approval Date: 07/22/2009

GENERAL NOTES:

1. STORM PANEL SHOWN ON THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2007 EDITION OF THE FLORIDA BUILDING CODE. STORM PANEL MAY BE INSTALLED AT HIGH VELOCITY HURRICANE ZONES. DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1620 OF THE ABOVE MENTIONED CODE, IN ORDER TO VERIFY THAT COMPONENTS AND ANCHORS ON THIS P.A.D. AS TESTED WERE NOT OVER STRESSED, A 33% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. FASTENERS SPACING TO WOOD HAS BEEN DETERMINED IN ACCORDANCE WITH N.D.S. 2005.

STORM PANEL'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1626 OF THE ABOVE MENTIONED CODE AS PER ATL REPORTS # 2425.01-00 AND # 0616.01-05, AS PROTOCOLS TAS-201, TAS-202 AND TAS-203.

2. ALL STEEL SHEET METAL PANELS SHALL HAVE STRUCTURAL QUALITY ASTM A-653 SQ, GRADE 40, WITH G-90 GALVANIZED STEEL DESIGNATION & Fy= 52.3 ksi. (AFTER ROLLED)

3. ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION 6063-T6 ALLOY & TEMPER UNLESS OTHERWISE NOTED.

4. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 AISI SERIES OR CORROSION RESISTANT COATED CARBON STEEL AS PER DIN 50018 W/ 50 ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH.

5. BOLTS TO BE ASTM A-307 GALVANIZED STEEL, OR AISI 304 SERIES STAINLESS STEEL, WITH 36 ksi MINIMUM YIELD STRENGTH.

6. ANCHORS TO WALL SHALL BE AS FOLLOWS:

(A) TO EXISTING POURED CONCRETE MINIMUM EDGE DISTANCE (E.D.), AS PER SHEETS 5 THRU 7:

- 1/4"Ø TAPCONS & MAXI-SET TAPCONS ANCHORS AS MANUFACTURED BY I.T.W./BUILDEX, INC (Min. f'c=3192 psi)
- 1/4"Ø CRETE-FLEX SS4 ANCHORS AS MANUFACTURED BY ELCO FASTENING SYSTEMS, LLC (Min. f'c=3350 psi)
- 1/4"Ø x 7/8" CALK-IN ANCHORS AS MANUFACTURED BY POWER FASTENERS, INC. (Min. f'c=3000 psi)
- 1/4"Ø "PANELMATE FEMALE ID" OR 1/4"Ø "PANELMATE PLUS" ANCHORS AS MANUFACTURED BY ELCO CONSTRUCTION PRODUCTS (Min. f'c=3350 psi)
- 1/4"Ø x 3/4" ALL POINTS SOLID-SET ANCHORS AS DISTRIBUTED BY ALL POINTS SCREW, BOLT & SPECIALTY CO. (Min. f'c=3000 psi)

NOTES:

A.1) MINIMUM EMBEDMENT INTO POURED CONCRETE OF TAPCON ANCHOR OR CRETE-FLEX SS4 IS 1 3/4", AND 2" FOR "PANELMATE FEMALE ID" AND "PANELMATE PLUS".

A.2) 7/8" CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.

A.3) MINIMUM EMBEDMENT OF 1/4"Ø x 3/4" ALL POINTS SOLID-SET ANCHORS SHALL BE 7/8" INTO POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 S.S. MACHINE SCREW USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.

A.4) IN CASE THAT PRECAST STONE, PRECAST CONCRETE PANELS, OR PAVERS BE FOUND ON THE EXISTING WALL OR FLOOR, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS, ANCHORAGE SHALL BE AS INDICATED ON NOTES A.1), A.2) & A.3) ABOVE.

(B) TO EXISTING CONCRETE BLOCK ASTM C-90:

- 1/4"Ø TAPCONS & MAXI-SET TAPCONS ANCHORS AS MANUFACTURED BY I.T.W./BUILDEX, INC.
- 1/4"Ø CRETE-FLEX SS4 ANCHORS AS MANUFACTURED BY ELCO FASTENING SYSTEMS, LLC.
- 1/4"Ø x 7/8" CALK-IN ANCHORS AS MANUFACTURED BY POWER FASTENERS, INC. (Min. f'm=1500 psi)
- 1/4"Ø "PANELMATE FEMALE ID" OR 1/4"Ø "PANELMATE PLUS" ANCHORS AS MANUFACTURED BY ELCO CONSTRUCTION PRODUCTS (Min. f'm=2071 psi)
- 1/4"Ø x 3/4" ALL POINTS SOLID-SET ANCHORS AS DISTRIBUTED BY ALL POINTS SCREW, BOLT & SPECIALTY CO. (Min. f'm=1800 psi)

NOTES:

B.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS, "PANELMATE FEMALE ID" ANCHORS, "PANELMATE PLUS" ANCHORS AND CRETE-FLEX SS4 ANCHORS, INTO THE CONCRETE BLOCK UNIT SHALL BE 1 1/4".

B.2) 7/8" CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE CONCRETE BLOCK UNIT. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.

B.3) MINIMUM EMBEDMENT OF 1/4"Ø x 3/4" ALL POINTS SOLID-SET ANCHORS SHALL BE 7/8" INTO THE CONCRETE BLOCK UNIT. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 S.S. MACHINE SCREW USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.

B.4) IN CASE THAT PRECAST STONE OR PRECAST CONCRETE PANELS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES IN B.1), B.2) & B.3) ABOVE.

(C) TO EXISTING WOOD (MIN. SPECIFIC GRAVITY, G = 0.55 MIN.): MINIMUM EDGE DISTANCE (E.D.) AS PER SHEETS 8 AND 9.

- 1/4"Ø "PANEMALTE PLUS" AND "PANELMATE FEMALE ID" ANCHORS AS MANUFACTURED BY ELCO CONSTRUCTION PRODUCTS.
- 1/4"Ø LAG SCREWS PER N.D.S.

NOTES:

C.1) MINIMUM THREADED PENETRATION INTO WOOD OF "PANEMALTE PLUS" ANCHORS AND female PANELMATES SHALL BE 1 7/8".

C.2) MINIMUM THREADED PENETRATION OF LAG SCREWS, INTO THE WOOD FRAME UNIT SHALL BE 1 1/2" NO THREADED PENETRATION INTO STUCCO SHALL BE CONSIDERED AS PART OF THE REQUIRED THREADED PENETRATION (EXCEPT AS NOTED).

C.3) IN CASE THAT PRECAST STONE, OR PRECAST CONCRETE PANELS, STUCCO OR WOOD BANS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS MENTIONED IN C.1) AND C.2).

(D) ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.

7. PANELS MAY BE ALSO INSTALLED HORIZONTALLY FOLLOWING INSTALLATION DETAILS SHOWN ON SECTIONS 1 THRU 8 (SHEETS 2 & 3 OF 9) AND SECTIONS A AND B (SHEETS 8 AND 9) EXCEPT THAT HEADERS ②, ③ & ④ SHALL NOT BE USED.

8. AT LEAST ONE WARNING LABEL PER OPENING SHALL BE PLACED IN A CONSPICUOUS LOCATION ON ANY OF THE COMPONENTS OF THE STORM PANELS SYSTEM ADVISING THE HOME OWNER OR TENANT THAT STORM PANELS WILL NOT OFFER HURRICANE PROTECTION UNLESS ALL REINFORCING BOLTS ARE PROPERLY INSTALLED WHEN REQUIRED.

9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE SHUTTER IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE. THIS SHUTTER SHALL ONLY BE ATTACHED TO CONCRETE, BLOCK OR WOOD FRAME BUILDINGS.

10. THE INSTALLATION CONTRACTOR IS TO SEAL/CAULK ALL SHUTTER COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION.

11. STORM PANEL INSTALLATION SHALL COMPLY WITH SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.

12. (a) THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.A.D.

(b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT BASED ON THIS P.A.D. PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.

(c) THIS PRODUCT APPROVAL DOCUMENT WILL BE CONSIDERED INVALID IF MODIFIED.

(d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.A.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.A.D. ENGINEER, SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

(e) THIS P.A.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

13. SHUTTER MANUFACTURER'S LABEL SHALL BE PLACED ON A READILY AND VISIBLE LOCATION AT PANEL. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABEL SHALL READ AS FOLLOWS:

EASTERN METAL SUPPLY, INC.
WEST PALM BEACH, FL.
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.

MIAMI-DADE COUNTY

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 09-0330-04
Expiration Date 06/07/2014
By *Healy J. Healy*
Miami Dade Product Control
Division

F.B.C.(High Velocity Hurricane Zone)

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TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33188
Phone : (305)871-1530 . Fax : (305)871-1531
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. # 44167

FEB 18 2009
P.E. SEAL/SIGNATURE/DATE

0.030" THICK GALVANIZED BERTHA
STEEL STORM PANEL

EASTERN METAL SUPPLY, INC.

4268 WESTROADS DR.
WEST PALM BEACH, FL 33407

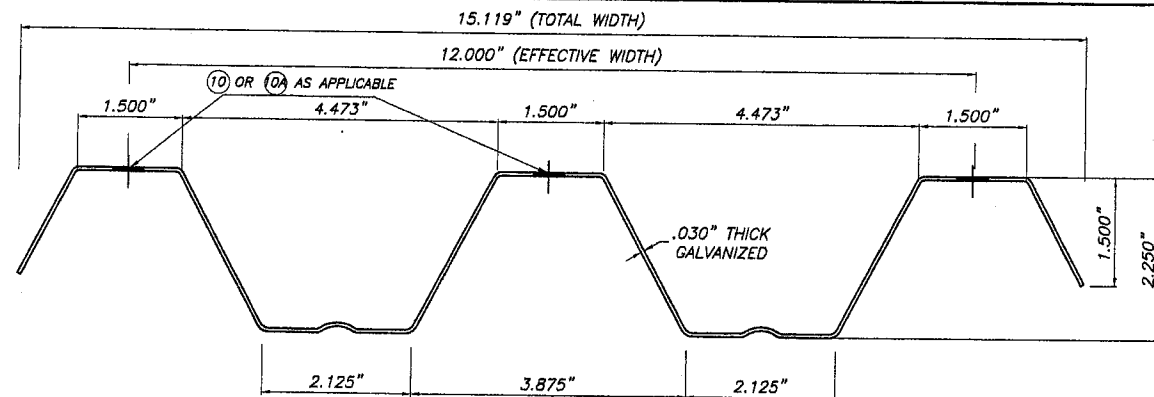
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 05-073	2/4/09	3	-	-
2	-	-	4	-	-

M.C.V.
DRAWN BY:

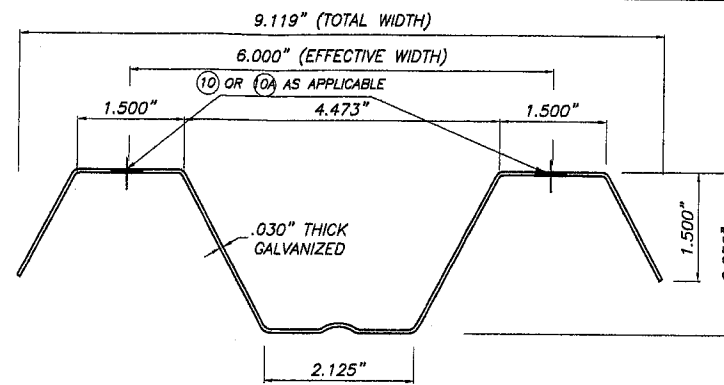
02/04/09
DATE

09-013
DRAWING No

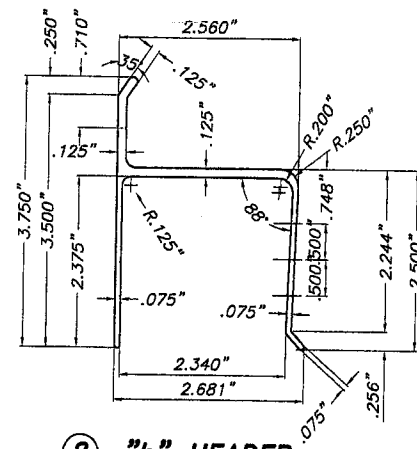
SHEET 1 OF 9



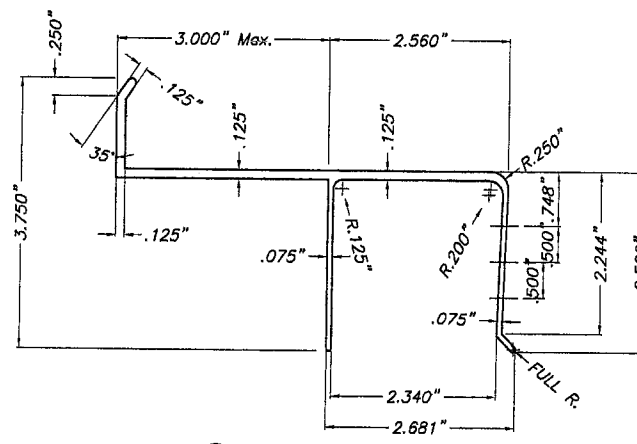
1 PANEL
SCALE: 3/8" = 1"



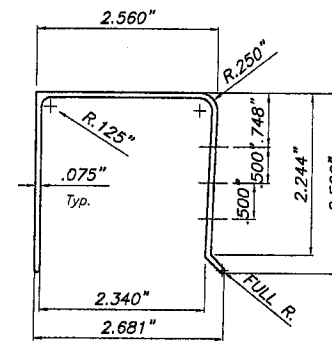
1A HALF PANEL
SCALE: 3/8" = 1"



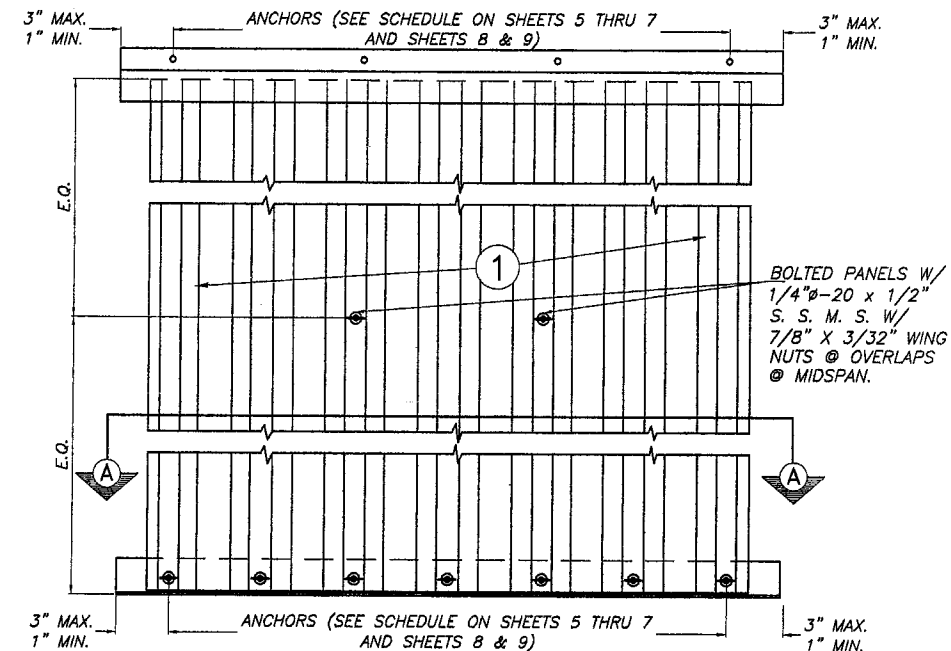
2 "h" HEADER
SCALE: 3/8" = 1"



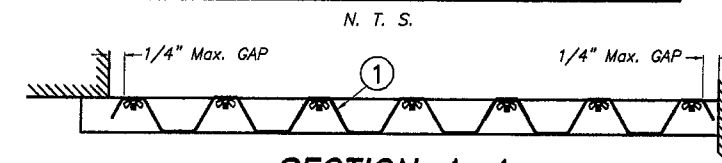
3 3" Max. "U" BUILD OUT
SCALE: 3/8" = 1"



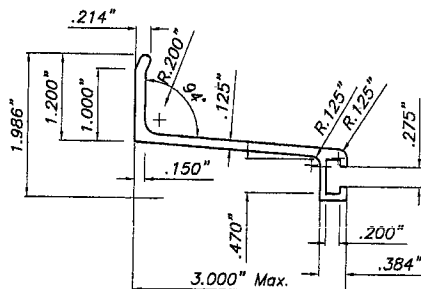
4 "U" HEADER
SCALE: 3/8" = 1"



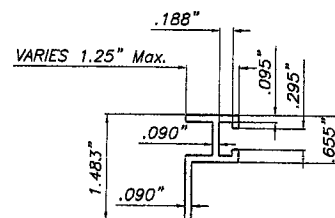
STORM PANEL TYPICAL ELEVATION



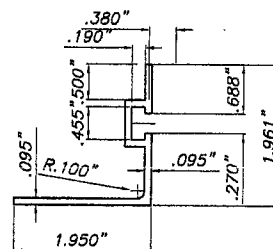
SECTION A-A
N. T. S.



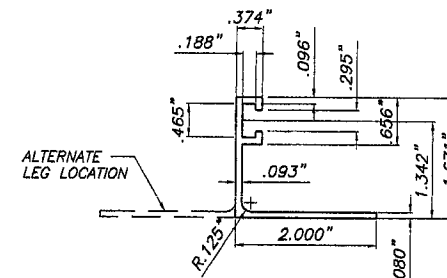
5 3" ANGLE BUILD OUT BRACKET
SCALE: 3/8" = 1"



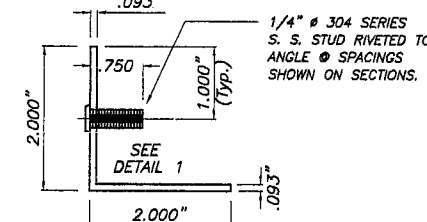
6 "F" TRACK
SCALE: 3/8" = 1"



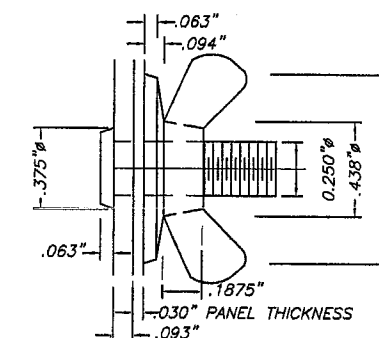
7 REVERSED "F" ANGLE TRACK
SCALE: 3/8" = 1"



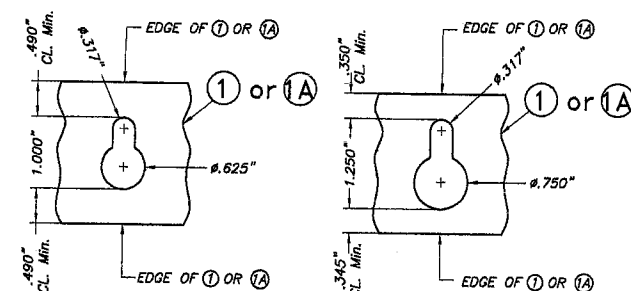
8 "F" TRACK ANGLE
SCALE: 3/8" = 1"



9 STUDDED ANGLE
SCALE: 3/8" = 1"



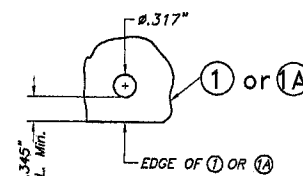
DETAIL 1: S.S. STUD W/ ZAMAC NICKEL PLATED WASHER WING NUT



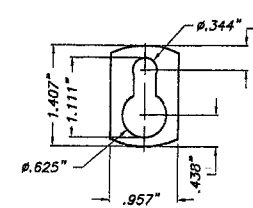
OPTION 1

OPTION 2

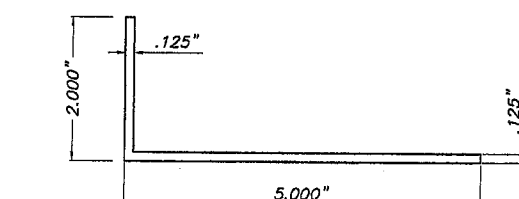
10 KEY HOLE AT PANEL



10A ROUND HOLE AT PANEL (OPTION TO 10)



11 KEY HOLE WASHER
3105-H154 Alum. ALLOY
SCALE: 3/8" = 1"



12 2" x 5" (Max.) x .125" ANGLE
SCALE: 3/8" = 1"

MIAMI-DADE COUNTY
PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 09-0330.04
Expiration Date 06/07/2014
By *[Signature]*
Miami Dade Product Control
Division

F.B.C.(High Velocity Hurricane Zone)

COMPONENTS

[Signature]

FEB 18 2009

P.E. SEAL/SIGNATURE/DATE

© 2009 TILTECO, INC.

TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone: (305)871-1530 Fax: (305)871-1531
EB-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

0.030" THICK GALVANIZED BERTHA
STEEL STORM PANEL

EASTERN METAL SUPPLY, INC.

4268 WESTROADS DR.
WEST PALM BEACH, FL 33407

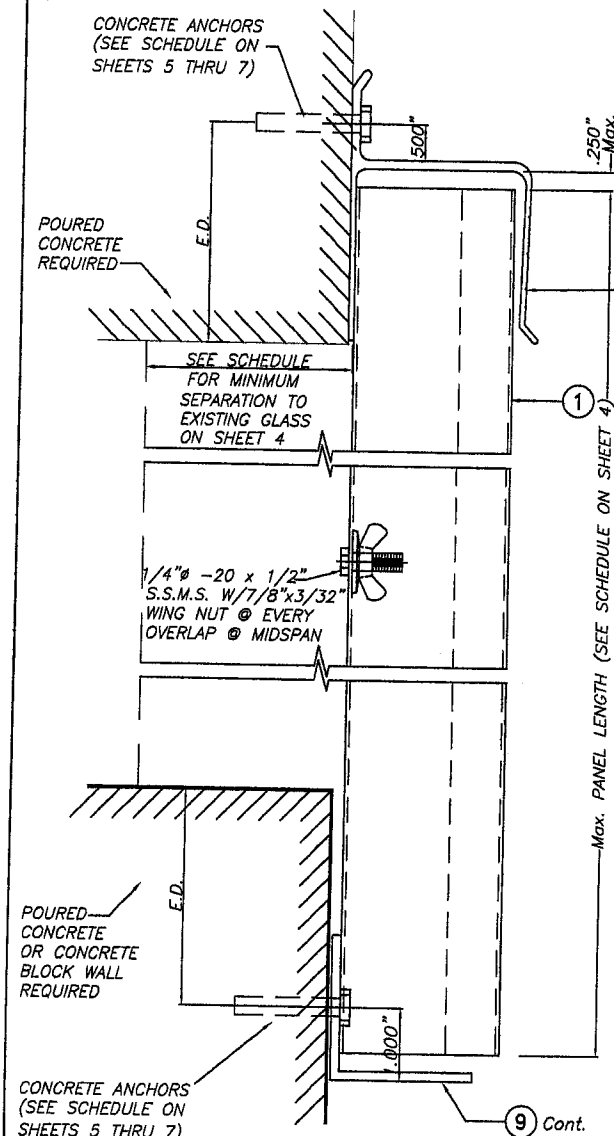
M.C.V.
DRAWN BY:

02/04/09
DATE

09-013
DRAWING No

SHEET 1A OF 9

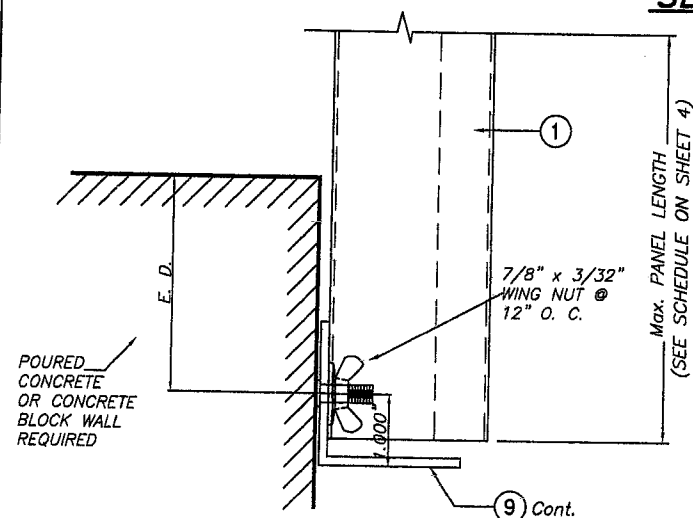
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 05-073	2/4/09	3	-	-
2	-	-	4	-	-



SECTION @ ANCHOR

WALL MOUNTING INSTALLATION SECTION 2

SCALE : 3/8" = 1"

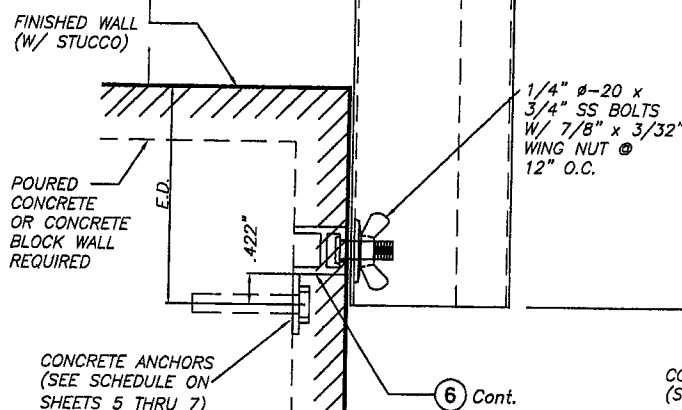


SECTION @ STUD

WALL MOUNTING INSTALLATION SECTION 1

SCALE : 3/8" = 1"

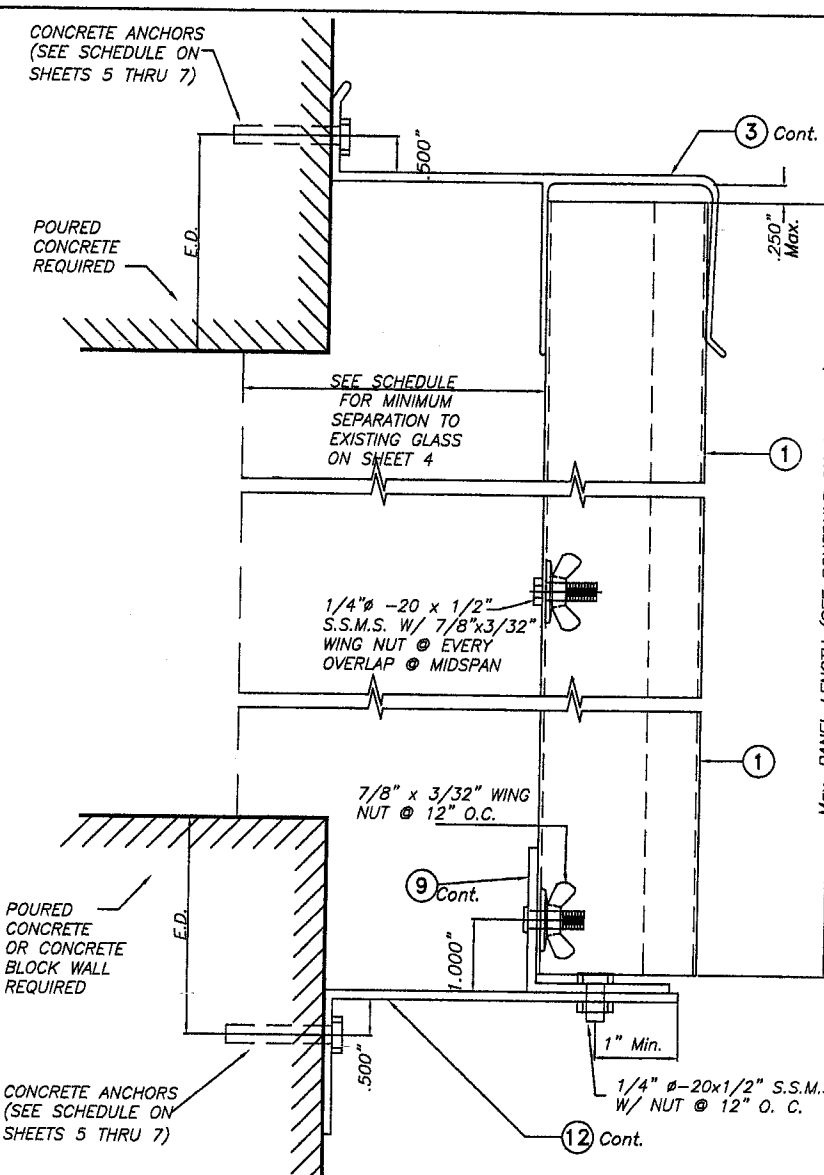
NOTE : DETAIL OF SECTION @ STUD VALID ALSO FOR
WALL MOUNTING INSTALLATION - SECTION 2 (TOP)



SECTION @ ANCHOR

BUILD OUT INSTALLATION SECTION 3

SCALE : 3/8" = 1"



BUILD OUT INSTALLATION SECTION 4

SCALE : 3/8" = 1"

E.D. = EDGE DISTANCE
(SEE SCHEDULE ON
SHEET 5, 6 & 7 OF 9)

NOTE FOR COMBINATION OF SECTIONS :
WALL MOUNTING SECTIONS CAN BE COMBINED IN
ANY WAY TO SUIT ANY INSTALLATION.

FEB 18 2009

P.E. SEAL/SIGNATURE/DATE

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TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6306 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305) 871-1530 • Fax : (305) 871-1531
EB-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

0.030" THICK GALVANIZED BERTHA
STEEL STORM PANEL

EASTERN METAL SUPPLY, INC.

4268 WESTROADS DR.
WEST PALM BEACH, FL 33407

REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1	OLD 05-073	2/4/09	3	-	-
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DRAWN BY:

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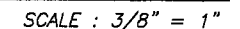
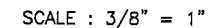
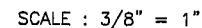
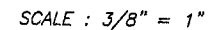
09-013
DRAWING No


SHEET 2 OF 9

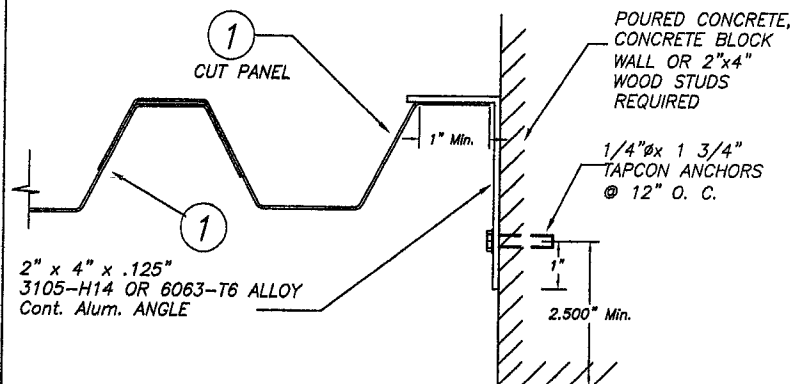
F.B.C.(High Velocity Hurricane Zone)

MIAMI-DADE COUNTY

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 09-0330-04
Expiration Date 06/07/2014
By: *Helmut A. Hahn*
Miami Dade Product Control
Division

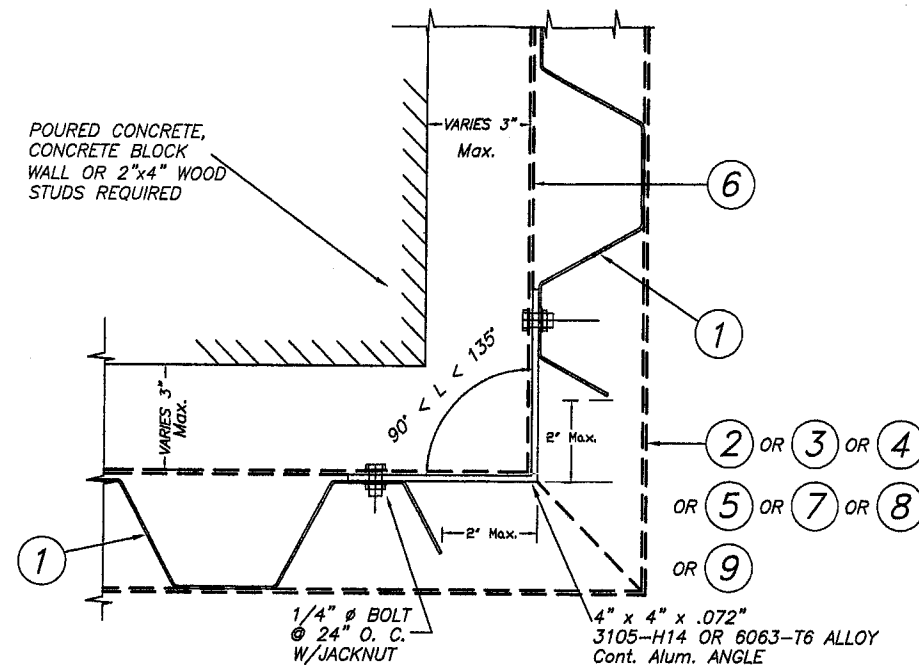


 <div style="border: 1px solid black; padding: 5px; display: inline-block;"> FEB 18 2003 </div> P.E. SEAL/SIGNATURE/DATE	© 2009 TILTECO, INC. <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 150px;"> TILTECO INC. </div> TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone : (305)871-1530 . Fax : (305)871-1531 EB-0006719 WALTER A. TILLIT Jr. P.E. FLORIDA Lic. # 44167	<div style="border: 1px solid black; padding: 5px; text-align: center;"> 0.030" THICK GALVANIZED BERTHA STEEL STORM PANEL </div> <div style="border: 1px solid black; padding: 10px; text-align: center; margin-top: 10px;"> EASTERN METAL SUPPLY, INC. 4268 WESTROADS DR. WEST PALM BEACH, FL 33407 </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 10%;">REV. NO</th> <th style="width: 40%;">DESCRIPTION</th> <th style="width: 10%;">DATE</th> <th style="width: 10%;">REV. No</th> <th style="width: 40%;">DESCRIPTION</th> <th style="width: 10%;">DATE</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>OLD 05-073</td> <td style="text-align: center;">2/4/09</td> <td style="text-align: center;">3</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">4</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> </tbody> </table>	REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	1	OLD 05-073	2/4/09	3	-	-	2	-	-	4	-	-	M.C.V. DRAWN BY: 02/04/09 DATE 09-013 DRAWING No SHEET 3 OF 9
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE																
1	OLD 05-073	2/4/09	3	-	-																
2	-	-	4	-	-																



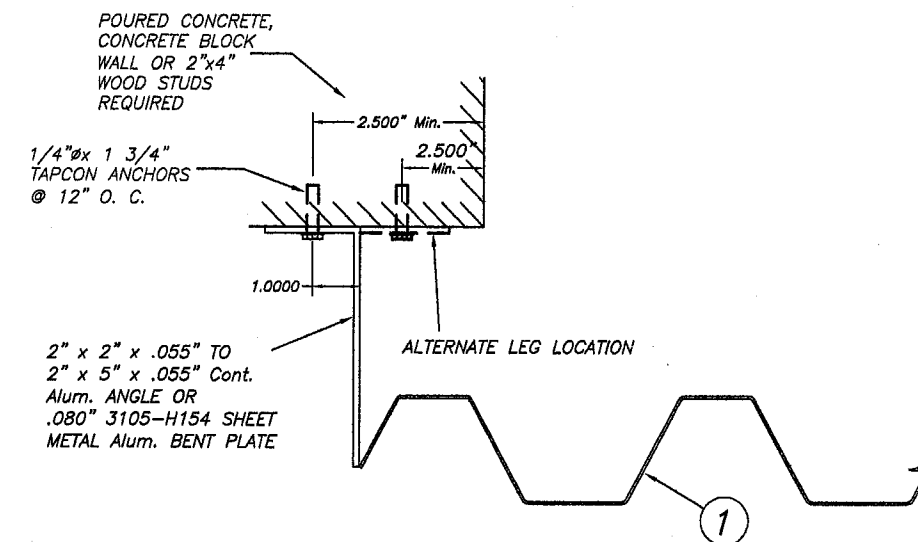
CASE A (Plan)

SCALE: 1/4" = 1"



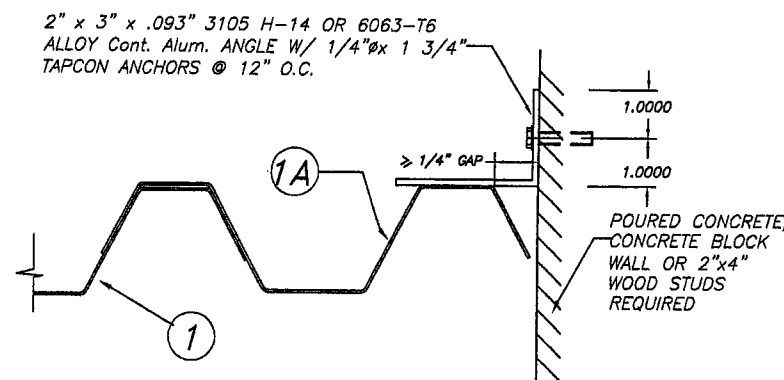
CASE B (Plan)

SCALE: 1/4" = 1"



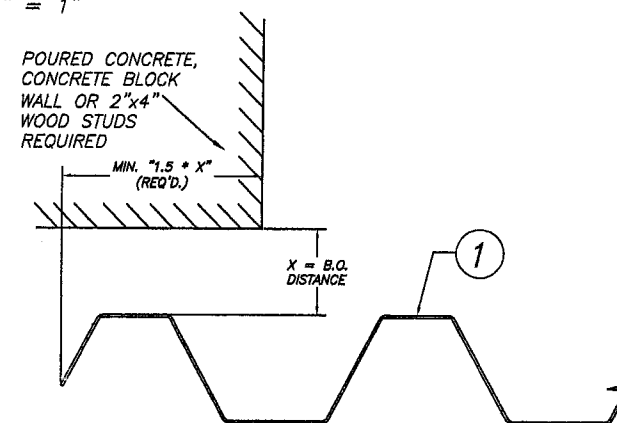
CASE C (Plan)

SCALE: 1/4" = 1"



CASE D (Plan)

SCALE: 1/4" = 1"



CASE E (Plan)

SCALE: 1/4" = 1"

END CLOSURES DETAILS



MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND CORRESPONDING MAXIMUM PANEL LENGTH "L" SCHEDULE

MAXIMUM DESIGN PRESSURE RATING W (p.s.f.)	Max. PANEL LENGTH L (ft.) (SEE SECTIONS)	MINIMUM SEPARATION TO GLASS	APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM
+66.0, -76.0	7'-6" OR LESS	3"	1,2,3,4,5 & 8
+60.0, -70.0	>7'-6" TO 8'-6"	3"	1,2,3,4,5 & 8
+66.0, -76.0	7'-6" OR LESS	3 3/4"	6 & 7
+60.0, -70.0	>7'-6" TO 8'-6"	3 3/4"	6 & 7

MIAMI-DADE COUNTY

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 09-0330-04
Expiration Date 06/07/2014
By *Helen A. Miller*
Miami Dade Product Control
Division

F.B.C.(High Velocity Hurricane Zone)

 P.E. SEAL/SIGNATURE/DATE	<div>© 2009 TILTECO, INC.</div> <div></div> <div>TILLIT TESTING & ENGINEERING COMPANY 8355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone : (305)871-1530 Fax : (305)871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. # 44167</div>	0.030" THICK GALVANIZED BERTHA STEEL STORM PANEL		M.C.V. DRAWN BY:			
		EASTERN METAL SUPPLY, INC. 4268 WESTROADS DR. WEST PALM BEACH, FL 33407		02/04/09 DATE			
				09-013 DRAWING No			
		REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
		1	OLD 05-073	2/4/09	3	-	-
		2	-	-	4	-	-

SHEET 4 OF 9

SHEET 4 OF 9

MAXIMUM DESIGN LOAD W (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" **												APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	I.T.W. BUILDEX		ELCO FASTENING SYSTEMS		ELCO CONSTRUCTION PRODUCTS				POWER FASTENERS		ALL POINTS			
	TAPCONS/MAXI-SET TAPCONS		CRETE-FLEX SS4		PANELMATE FEMALE ID		PANELMATE PLUS		CALK-IN		SOLID-SET			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+60.0, -61.5	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	1 (TOP)	6'-0" OR LESS
	12"	10"	12"	8"	12"	12"	12"	11"	12"	11"	12"	12"	1 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	12"	2 (TOP)	
	12"	10"	12"	8"	12"	12"	12"	11"	12"	11"	N/A	N/A	2 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	3 (TOP)	
	12"	10"	12"	8"	12"	12"	12"	11"	12"	11"	N/A	N/A	3 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	4 (TOP)	
	12"	10"	12"	8"	12"	12"	12"	11"	12"	11"	N/A	N/A	4 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	5 (TOP)	
	12"	9"	12"	7"	12"	12"	12"	10"	12"	10"	N/A	N/A	5 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	12"	N/A	N/A	N/A	6 (TOP)	
	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	12"	N/A	N/A	N/A	6 (BOTTOM)	
	12"	N/A	10"	N/A	12"	N/A	N/A	N/A	11"	N/A	N/A	N/A	7 (TOP/BOTTOM)	
	N/A	N/A	N/A	N/A	12"	12"	12"	12"	12"	6"	12"	12"	8 (TOP/BOTTOM)	
+66.0, -72.0	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	1 (TOP)	6'-0" OR LESS
	12"	8"	12"	7"	12"	12"	12"	10"	12"	9 1/2"	12"	12"	1 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	12"	2 (TOP)	
	12"	8"	12"	7"	12"	12"	12"	10"	12"	9 1/2"	N/A	N/A	2 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	3 (TOP)	
	12"	8"	12"	7"	12"	12"	12"	10"	12"	9 1/2"	N/A	N/A	3 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	4 (TOP)	
	12"	8"	12"	7"	12"	12"	12"	10"	12"	9 1/2"	N/A	N/A	4 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	5 (TOP)	
	12"	6"	12"	5"	12"	10"	12"	7"	12"	7"	N/A	N/A	5 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	12"	N/A	N/A	N/A	6 (TOP)	
	12"	N/A	10"	N/A	12"	N/A	N/A	N/A	11"	N/A	N/A	N/A	6 (BOTTOM)	
	10"	N/A	8 1/2"	N/A	11"	N/A	N/A	N/A	9"	N/A	N/A	N/A	7 (TOP/BOTTOM)	
	N/A	N/A	N/A	N/A	12"	12"	12"	6"	12"	6"	12"	12"	8 (TOP/BOTTOM)	
+60.0, -61.5	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	1 (TOP)	>6'-0" TO 7'-6"
	12"	8"	12"	6 1/2"	12"	12"	12"	8"	12"	9"	12"	12"	1 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	12"	2 (TOP)	
	12"	8"	12"	6 1/2"	12"	12"	12"	9"	12"	9"	N/A	N/A	2 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	3 (TOP)	
	12"	8"	12"	6 1/2"	12"	12"	12"	9"	12"	9"	N/A	N/A	3 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	4 (TOP)	
	12"	8"	12"	6 1/2"	12"	12"	12"	9"	12"	9"	N/A	N/A	4 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	5 (TOP)	
	12"	5"	10 1/2"	4"	12"	9"	12"	6"	12"	5"	N/A	N/A	5 (BOTTOM)	
	12"	N/A	12"	N/A	12'	N/A	N/A	N/A	12"	N/A	N/A	N/A	6 (TOP)	
	11"	N/A	9 1/2"	N/A	12'	N/A	N/A	N/A	10 1/2"	N/A	N/A	N/A	6 (BOTTOM)	
	9"	N/A	11 1/2"	N/A	10 1/2'	N/A	N/A	N/A	9 1/2"	N/A	N/A	N/A	7 (TOP/BOTTOM)	
	N/A	N/A	N/A	N/A	12"	12"	12"	6"	12"	6"	12"	12"	8 (TOP/BOTTOM)	

** MINIMUM ANCHOR SPACING LISTED BELOW ARE AS PER MIN. EDGE DISTANCE SCHEDULE. FOR E.D. LESS SCHEDULE INDICATED, REDUCE ANCHOR SPACING BY MULTIPLYING SPACING SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. FOR THIS OPERATION TO BE POSSIBLE, REDUCED SPACING OBTAINED USING FACTOR SHALL NOT BE LESS THAN MINIMUM SPACING INDICATED FOR EACH ANCHOR TYPE AT ANCHORS LEGEND.

ACTUAL E. D.	FACTOR					
	TAPCON	CRETE-FLEX SS4 ▲	FEMALE PANELMATE	PANELMATE PLUS	CALK-IN	SOLID-SET
	Min. spacing=3"	Min. spacing=3"	Min. spacing=3"	Min. spacing=3"	Min. spacing=2 1/2"	Min. spacing=3"
1 1/2"	.35	.50	—	—	—	—
2 1/2"	—	—	—	—	0.50	.63
3"	1.00	1.00	—	1.00	0.63	—
3 1/2"	—	—	1.00	—	1.00	1.00

▲ REDUCTION FACTOR APPLICABLE FOR POURED CONCRETE ONLY.


E.D. = EDGE DISTANCE

** MINIMUM ANCHORS E.D. SCHEDULE

ANCHORS TYPE	MINIMUM EDGE DISTANCE (E.D.)	
	CONCRETE	C. BLOCK
1/4" TAPCON	3"	3"
1/4" PANELMATE FEMALE ID	3"	3 1/2"
1/4" PANELMATE PLUS	3"	3 1/2"
1/4" CALK-IN	3"	4"
1/4" SOLID-SET	3 1/2"	3 1/2"

MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS INTO CONCRETE AND CONCRETE BLOCK STRUCTURES *

* SEE NOTES ON SHEET 8 & 9 OF 9 FOR ANCHOR TYPES & SPACING FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS.


FEB 18 2009
P.E. SEAL/SIGNATURE/DATE

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0.030" THICK GALVANIZED BERTHA
STEEL STORM PANEL

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1	OLD 05-073	2/4/09	3	—	—
2	—	—	4	—	—


M.C.V.
DRAWN BY:

02/04/09
DATE

09-013
DRAWING No

SHEET 5 OF 9

MIAMI-DADE COUNTY

PRODUCT REVISED
as complying with the Florida
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Acceptance No 09-0330-04
Expiration Date 06/07/2014
By 
Miami Dade Product Center
Division

F.B.C.(High Velocity Hurricane Zone)

MAXIMUM DESIGN LOAD W (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" **												APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	I.T.W. BUILDEX		ELCO FASTENING SYSTEMS		ELCO CONSTRUCTION PRODUCTS				POWER FASTENERS		ALL POINTS			
	TAPCONS/MAXI-SET TAPCONS		CRETE-FLEX SS4		PANELMATE FEMALE ID		PANELMATE PLUS		CALK-IN		SOLID-SET			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+56.0, -72.0	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	1 (TOP)	>6'-0" TO 7'-6"
	12"	6"	12"	5 1/2"	12"	11"	12"	8"	12"	7 1/2"	12"	12"	1 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	12"	2 (TOP)	
	12"	6"	12"	5 1/2"	12"	11"	12"	8"	12"	7 1/2"	N/A	N/A	2 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	3 (TOP)	
	12"	6"	12"	5 1/2"	12"	11"	12"	8"	12"	7 1/2"	N/A	N/A	3 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	4 (TOP)	
	12"	6"	12"	5 1/2"	12"	11"	12"	8"	12"	7 1/2"	N/A	N/A	4 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	5 (TOP)	
	11"	4"	8"	3"	12"	6"	12"	4"	11"	4 1/2"	N/A	N/A	5 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	11"	N/A	N/A	N/A	6 (TOP)	
	9"	N/A	8"	N/A	10"	N/A	N/A	N/A	8"	N/A	N/A	N/A	6 (BOTTOM)	
	8"	N/A	10"	N/A	9"	N/A	N/A	N/A	7"	N/A	N/A	N/A	7 (TOP/BOTTOM)	
	N/A	N/A	N/A	N/A	12"	12"	12"	6"	12"	6"	12"	12"	8 (TOP/BOTTOM)	
+60.0, -61.5	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	1 (TOP)	>7'-6" TO 8'-6"
	12"	7"	12"	5 1/2"	12"	12"	12"	8"	12"	8"	12"	12"	1 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	12"	2 (TOP)	
	12"	7"	12"	5 1/2"	12"	12"	12"	8"	12"	8"	N/A	N/A	2 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	3 (TOP)	
	12"	7"	12"	5 1/2"	12"	12"	12"	8"	12"	8"	N/A	N/A	3 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	4 (TOP)	
	12"	7"	12"	5 1/2"	12"	12"	12"	8"	12"	8"	N/A	N/A	4 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	5 (TOP)	
	12"	4"	8 1/2"	3"	12"	7"	12"	4"	12"	4 1/2"	N/A	N/A	5 (BOTTOM)	
	9"	N/A	12"	N/A	12"	N/A	N/A	N/A	11"	N/A	N/A	N/A	6 (TOP)	
	10 1/2"	N/A	8 1/2"	N/A	10 1/2"	N/A	N/A	N/A	9"	N/A	N/A	N/A	6 (BOTTOM)	
	8"	N/A	10 1/2"	N/A	9"	N/A	N/A	N/A	7"	N/A	N/A	N/A	7 (TOP/BOTTOM)	
	N/A	N/A	N/A	N/A	12"	12"	12"	6"	12"	6"	12"	12"	8 (TOP/BOTTOM)	
+66.0, -72.0	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	1 (TOP)	>7'-6" TO 8'-6"
	12"	6"	12"	4 1/2"	12"	10"	12"	7"	12"	6 1/2"	12"	12"	1 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	12"	2 (TOP)	
	12"	6"	12"	4 1/2"	12"	10"	12"	7"	12"	6 1/2"	N/A	N/A	2 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	3 (TOP)	
	12"	6"	12"	4 1/2"	12"	10"	12"	7"	12"	6 1/2"	N/A	N/A	3 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	4 (TOP)	
	12"	6"	12"	4 1/2"	12"	10"	12"	7"	12"	6 1/2"	N/A	N/A	4 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	5 (TOP)	
	9"	3"	6"	N/A	11"	5"	11"	3"	9"	3 1/2"	N/A	N/A	5 (BOTTOM)	
	11"	N/A	11"	N/A	11 1/2"	N/A	N/A	N/A	10"	N/A	N/A	N/A	6 (TOP)	
	8"	N/A	7"	N/A	9"	N/A	N/A	N/A	7"	N/A	N/A	N/A	6 (BOTTOM)	
	7"	N/A	6 1/2"	N/A	7 1/2"	N/A	N/A	N/A	6"	N/A	N/A	N/A	7 (TOP/BOTTOM)	
	N/A	N/A	N/A	N/A	12"	6"	12"	6"	12"	6"	12"	12"	8 (TOP/BOTTOM)	

** MINIMUM ANCHOR SPACINGS LISTED BELOW ARE AS PER MIN. EDGE DISTANCE SCHEDULE. FOR E.D. LESS THAN INDICATED ON SCHEDULE, REDUCE ANCHOR SPACING BY MULTIPLYING SPACING SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. FOR THIS OPERATION TO BE POSSIBLE, REDUCED SPACING OBTAINED USING FACTOR SHALL NOT BE LESS THAN MINIMUM SPACING INDICATED FOR EACH ANCHOR TYPE AT ANCHORS LEGEND.						
ACTUAL E. D.	FACTOR					
	TAPCON	CRETE-FLEX SS4 Δ	FEMALE PANELMATE	PANELMATE PLUS	CALK-IN	SOLID-SET
	Min. spacing=3"	Min. spacing=3"	Min. spacing=3"	Min. spacing=3"	Min. spacing=2 1/2"	Min. spacing=3"
1 1/2"	.35	.50	-	-	-	-
2 1/2"	-	-	-	-	0.50	.63
3"	1.00	1.00	-	1.00	0.63	-
3 1/2"	-	-	1.00	-	1.00	1.00

Δ REDUCTION FACTOR APPLICABLE FOR POURED CONCRETE ONLY.

E.D. = EDGE DISTANCE

** MINIMUM ANCHORS E.D. SCHEDULE		
ANCHORS TYPE	MINIMUM EDGE DISTANCE (E.D.)	
	CONCRETE	C. BLOCK
1/4" TAPCON	3"	3"
1/4" PANELMATE FEMALE ID	3"	3 1/2"
1/4" PANELMATE PLUS	3"	3 1/2"
1/4" CALK-IN	3"	4"
1/4" SOLID-SET	3 1/2"	3 1/2"

MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING
SCHEDULE FOR INSTALLATIONS INTO CONCRETE AND CONCRETE BLOCK STRUCTURES *

* SEE NOTES ON SHEET 8 & 9 OF 9 FOR ANCHOR TYPES & SPACING FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS.

F.B.C.(High Velocity Hurricane Zone)

FEB 18 2009
P.E. SEAL/SIGNATURE/DATE

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TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 • Fax : (305)871-1531
EB-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

0.030" THICK GALVANIZED BERTHA STEEL STORM PANEL

EASTERN METAL SUPPLY, INC.
4268 WESTROADS DR.
WEST PALM BEACH, FL 33407

REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1	OLD 05-073	2/4/09	3	-	-
2	-	-	4	-	-

MIAMI-DADE COUNTY

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 09-0330.04
Expiration Date 06/07/2014
By
Miami-Dade Product Control
Division

M.C.V.
DRAWN BY:
02/04/09
DATE
09-013
DRAWING No
SHEET 6 OF 9

MAXIMUM DESIGN LOAD W (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" **												APPLICABLE TO SECTIONS # 8 & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	I.T.W. BUILDEX		ELCO FASTENING SYSTEMS		ELCO CONSTRUCTION PRODUCTS				POWER FASTENERS		ALL POINTS			
	TAPCONS/MAXI-SET TAPCONS		CRETE-FLEX SS4		PANELMATE FEMALE ID		PANELMATE PLUS		CALK-IN		SOLID-SET			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+66.0, -76.0	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	1 (TOP)	6'-0" OR LESS
	12"	8"	12"	6 1/2"	12"	12"	12"	9"	12"	9"	12"	12"	1 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	12"	2 (TOP)	
	12"	8"	12"	6 1/2"	12"	12"	12"	9"	12"	9"	N/A	N/A	2 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	3 (TOP)	
	12"	8"	12"	6 1/2"	12"	12"	12"	9"	12"	9"	N/A	N/A	3 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	4 (TOP)	
	12"	8"	12"	6 1/2"	12"	12"	12"	9"	12"	9"	N/A	N/A	4 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	5 (TOP)	
	12"	5"	12"	4 1/2"	12"	9"	12"	6"	12"	6"	N/A	N/A	5 (BOTTOM)	
	12"	N/A	11"	N/A	12"	N/A	N/A	N/A	12"	N/A	N/A	N/A	6 (TOP)	
	11"	N/A	12"	N/A	12"	N/A	N/A	N/A	10"	N/A	N/A	N/A	6 (BOTTOM)	
9"	N/A	9 1/2"	N/A	10 1/2"	N/A	N/A	N/A	9"	N/A	N/A	N/A	7 (TOP/BOTTOM)	>6'-0" TO 7'-6"	
N/A	N/A	N/A	N/A	12"	12"	12"	6"	12"	6"	12"	12"	8 (TOP/BOTTOM)		
12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	1 (TOP)		>6'-0" TO 7'-6"
12"	6"	12"	5"	12"	11"	12"	7 1/2"	12"	7"	12"	12"	1 (BOTTOM)		
12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	12"	2 (TOP)		
12"	6 1/2"	12"	5"	12"	12"	12"	7 1/2"	12"	7"	N/A	N/A	2 (BOTTOM)		
12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	3 (TOP)		
12"	6"	12"	5"	12"	11"	12"	7 1/2"	12"	7"	N/A	N/A	3 (BOTTOM)		
12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	4 (TOP)		
12"	6"	12"	5"	12"	11"	12"	7 1/2"	12"	7"	N/A	N/A	4 (BOTTOM)		
12"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	5 (TOP)		
10 1/2"	3 1/2"	7"	4"	12"	6"	12"	4"	10 1/2"	4"	N/A	N/A	5 (BOTTOM)		
11 1/2"	N/A	11"	N/A	12"	N/A	N/A	N/A	10 1/2"	N/A	N/A	N/A	6 (TOP)		
9"	N/A	7 1/2"	N/A	9 1/2"	N/A	N/A	N/A	8"	N/A	N/A	N/A	6 (BOTTOM)	>7'-6" TO 8'-6"	
7 1/2"	N/A	9 1/2"	N/A	8 1/2"	N/A	N/A	N/A	7"	N/A	N/A	N/A	7 (TOP/BOTTOM)		
N/A	N/A	N/A	N/A	12"	6"	12"	6"	12"	6"	12"	12"	8 (TOP/BOTTOM)		
12"	N/A	11 1/2"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	1 (TOP)		>7'-6" TO 8'-6"
12"	5"	11 1/2"	4 1/2"	12"	9"	12"	6"	12"	6 1/2"	12"	12"	1 (BOTTOM)		
12"	N/A	11 1/2"	N/A	12"	N/A	12"	N/A	12"	N/A	12"	12"	2 (TOP)		
12"	5"	11 1/2"	4 1/2"	12"	9"	12"	6"	12"	6 1/2"	N/A	N/A	2 (BOTTOM)		
12"	N/A	11 1/2"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	3 (TOP)		
12"	5"	11 1/2"	4 1/2"	12"	9"	12"	6"	12"	6 1/2"	N/A	N/A	3 (BOTTOM)		
12"	N/A	11 1/2"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	4 (TOP)		
12"	5"	11 1/2"	4 1/2"	12"	9"	12"	6"	12"	6 1/2"	N/A	N/A	4 (BOTTOM)		
12"	N/A	11 1/2"	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	N/A	5 (TOP)		
8"	N/A	5 1/2"	3"	10"	4 1/2"	10"	3"	8"	3"	N/A	N/A	5 (BOTTOM)		
10"	N/A	10 1/2"	N/A	11"	N/A	N/A	N/A	9"	N/A	N/A	N/A	6 (TOP)		
8"	N/A	7"	N/A	8 1/2"	N/A	N/A	N/A	7"	N/A	N/A	N/A	6 (BOTTOM)		
7"	N/A	8 1/2"	N/A	7 1/2"	N/A	N/A	N/A	6"	N/A	N/A	N/A	7 (TOP/BOTTOM)	>7'-6" TO 8'-6"	
N/A	N/A	N/A	N/A	12"	6"	12"	6"	12"	6"	12"	12"	8 (TOP/BOTTOM)		

** MINIMUM ANCHOR SPACING LISTED BELOW ARE AS PER MIN. EDGE DISTANCE SCHEDULE. FOR E.D. LESS SCHEDULE INDICATED, REDUCE ANCHOR SPACING BY MULTIPLYING SPACING SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. FOR THIS OPERATION TO BE POSSIBLE, REDUCED SPACING OBTAINED USING FACTOR SHALL NOT BE LESS THAN MINIMUM SPACING INDICATED FOR EACH ANCHOR TYPE AT ANCHORS LEGEND.

ACTUAL E. D.	FACTOR					
	TAPCON	CRETE-FLEX SS4 Δ	FEMALE PANELMATE	PANELMATE PLUS	CALK-IN	SOLID-SET
	Min. spacing=3"	Min. spacing=3"	Min. spacing=3"	Min. spacing=3"	Min. spacing=2 1/2"	Min. spacing=3"
1 1/2"	.35	.50	—	—	—	—
2 1/2"	—	—	—	—	0.50	.63
3"	1.00	1.00	—	1.00	0.63	—
3 1/2"	—	—	1.00	—	1.00	1.00

Δ REDUCTION FACTOR APPLICABLE FOR POURED CONCRETE ONLY.

E.D. = EDGE DISTANCE

** MINIMUM ANCHORS E.D. SCHEDULE


ANCHORS TYPE	MINIMUM EDGE DISTANCE (E.D.)	
	CONCRETE	C. BLOCK
1/4" TAPCON	3"	3"
1/4" PANELMATE FEMALE ID	3"	3 1/2"
1/4" PANELMATE PLUS	3"	3 1/2"
1/4" CALK-IN	3"	4"
1/4" SOLID-SET	3 1/2"	3 1/2"

MIAMI-DADE COUNTY
 PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No 09-0330-04
 Expiration Date 06/07/2014
 By *Healy A. Walker*
 Miami-Dade Product Control
 Division

F.B.C.(High Velocity Hurricane Zone)


**MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING
 SCHEDULE FOR INSTALLATIONS INTO CONCRETE AND CONCRETE BLOCK STRUCTURES ***

* SEE NOTES ON SHEET 8 & 9 OF 9 FOR ANCHOR TYPES &
 SPACING FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS.



FEB 18 2009
 P.E. SEAL/SIGNATURE/DATE

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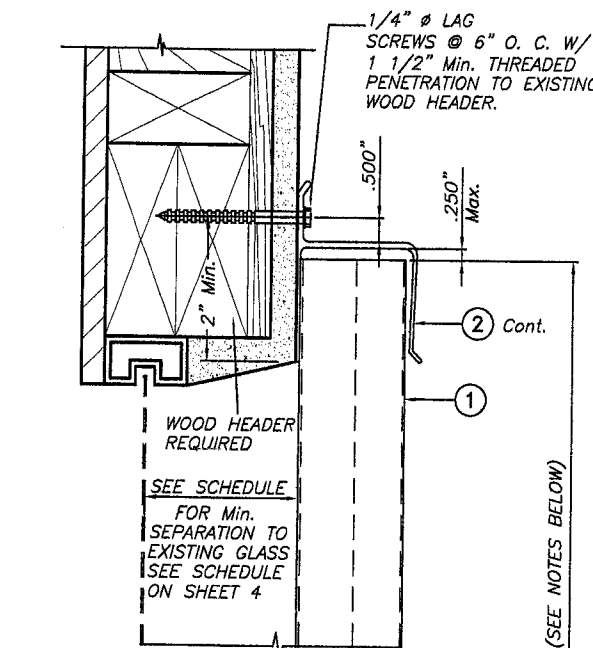
TILLIT TESTING & ENGINEERING COMPANY
 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
 Phone : (305)871-1530 • Fax : (305)871-1531
 EB-0006719
 WALTER A. TILLIT Jr. P.E.
 FLORIDA Lic. # 44167

0.030" THICK GALVANIZED BERTHA
 STEEL STORM PANEL

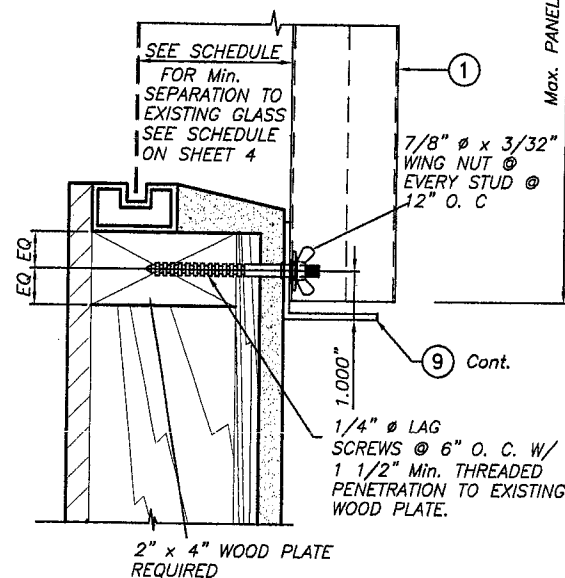
EASTERN METAL SUPPLY, INC.
 4268 WESTROADS DR.
 WEST PALM BEACH, FL 33407

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1	OLD 05-073	2/4/09	3	—	—
2	—	—	4	—	—

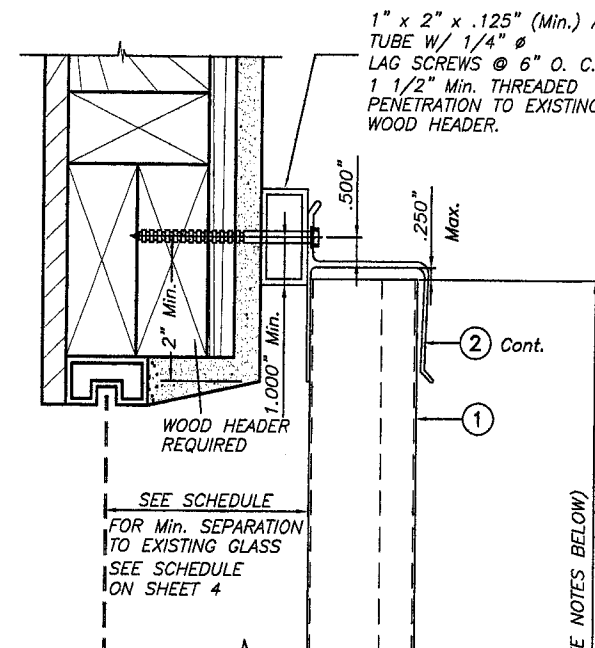
M.C.V.
 DRAWN BY:
 02/04/09
 DATE
 09-013
 DRAWING No
 SHEET 7 OF 9



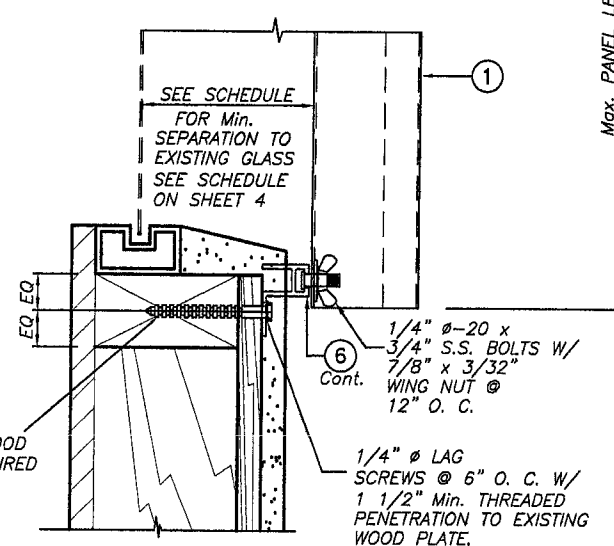
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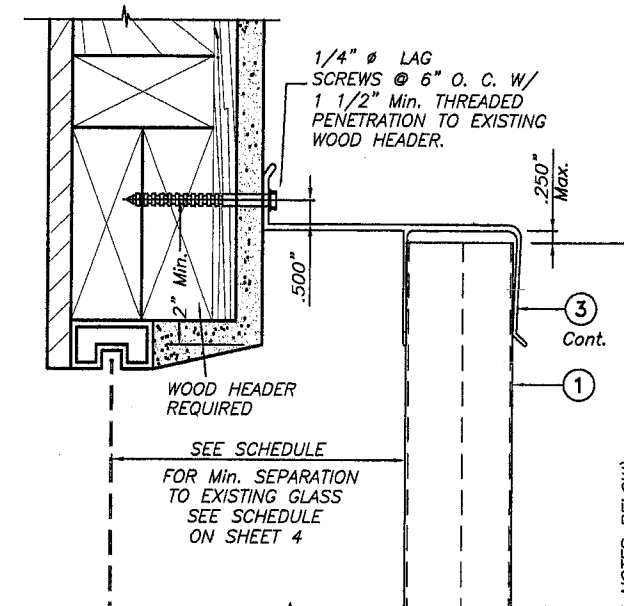
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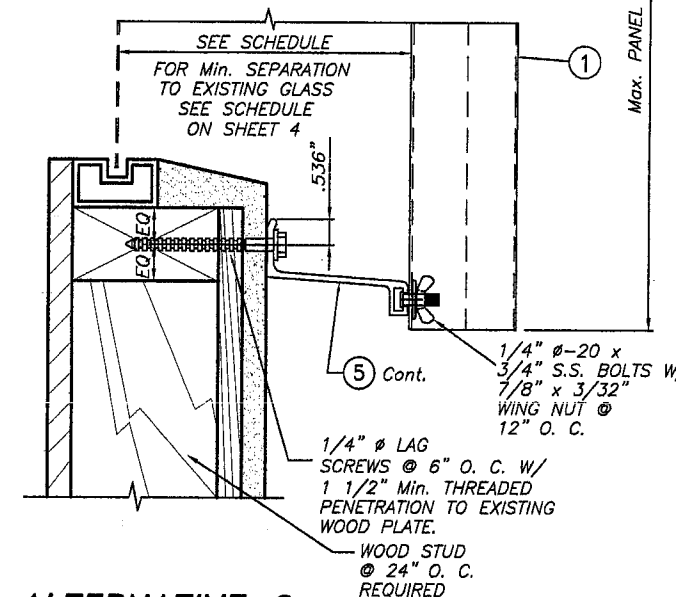
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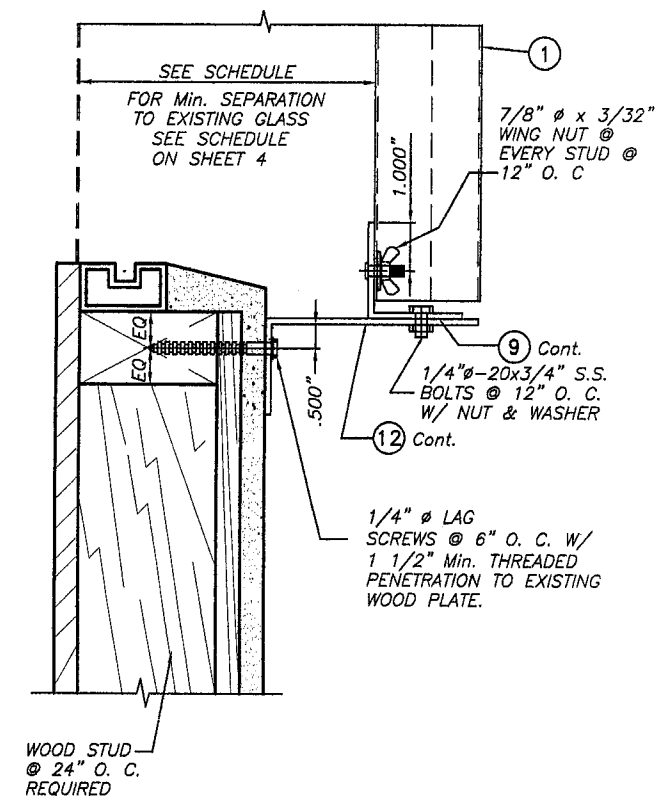
ALTERNATIVE 4



ALTERNATIVE 5



ALTERNATIVE 6



ALTERNATIVE 7

WALL MOUNTING INSTALLATIONS

SECTIONS A

SCALE : 1/4" = 1"

INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS

NOTE FOR COMBINATION OF SECTIONS:

WALL MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

NOTES:

1. INSTALLATIONS ARE ONLY VALID FOR DESIGN WIND LOADS AND Max. PANEL LENGTHS AS PER SCHEDULE ON SHEET 4 OF 9
2. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

MIAMI-DADE COUNTY

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 09-0330-04
Expiration Date 06/07/2014

By *Heather H. Miller*
Miami Dade Product Control
Division

F.B.C.(High Velocity Hurricane Zone)

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Phone : (305)871-1530 Fax : (305)871-1531
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WALTER A. TILLIT Jr. P.E.
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0.030" THICK GALVANIZED BERTHA
STEEL STORM PANEL

EASTERN METAL SUPPLY, INC.

4268 WESTROADS DR.
WEST PALM BEACH, FL 33407

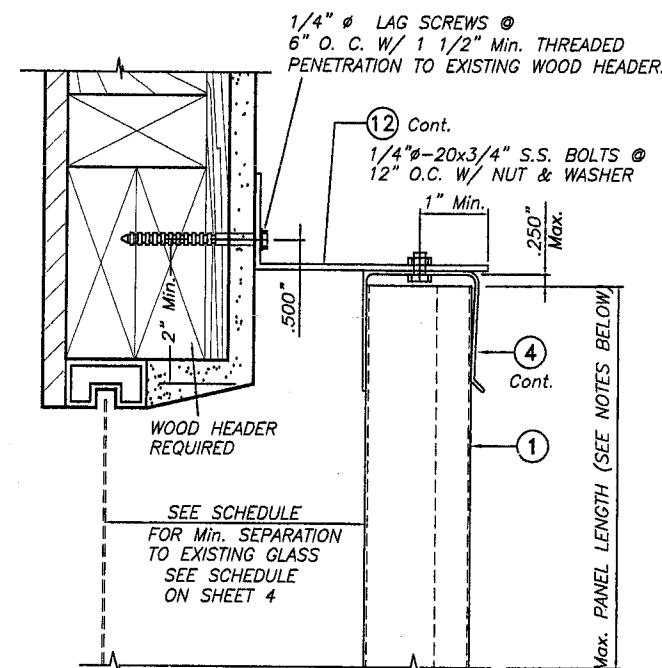
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DRAWN BY:

02/04/09
DATE

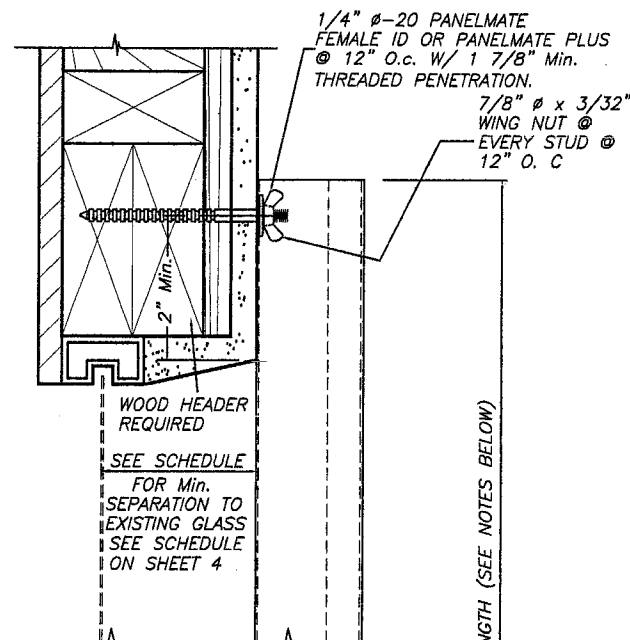
09-013
DRAWING No

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	-	-	4	-	-

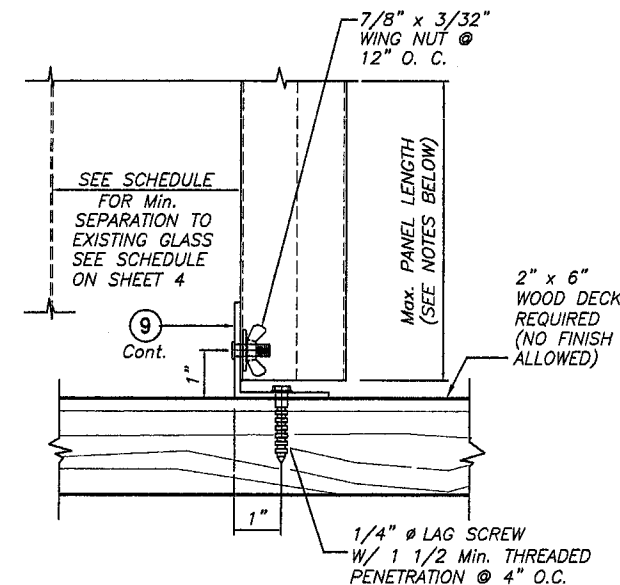
SHEET 8 OF 9



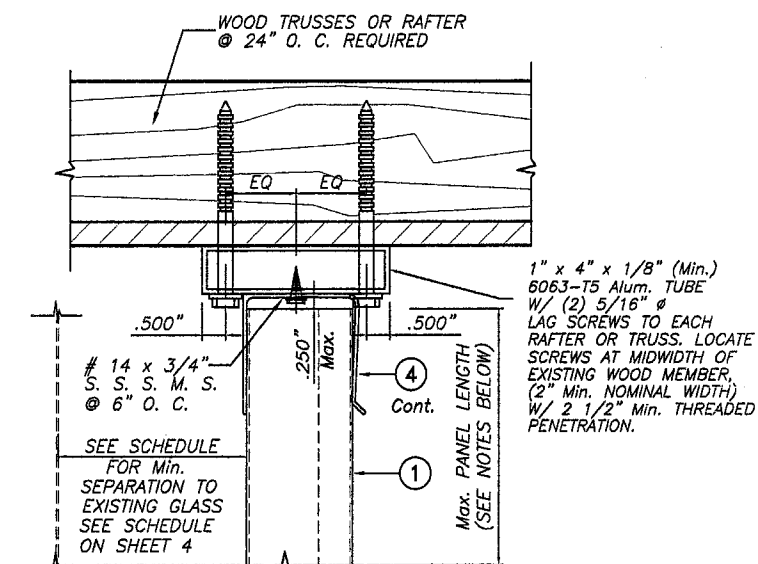
ALTERNATIVE 8



ALTERNATIVE 10

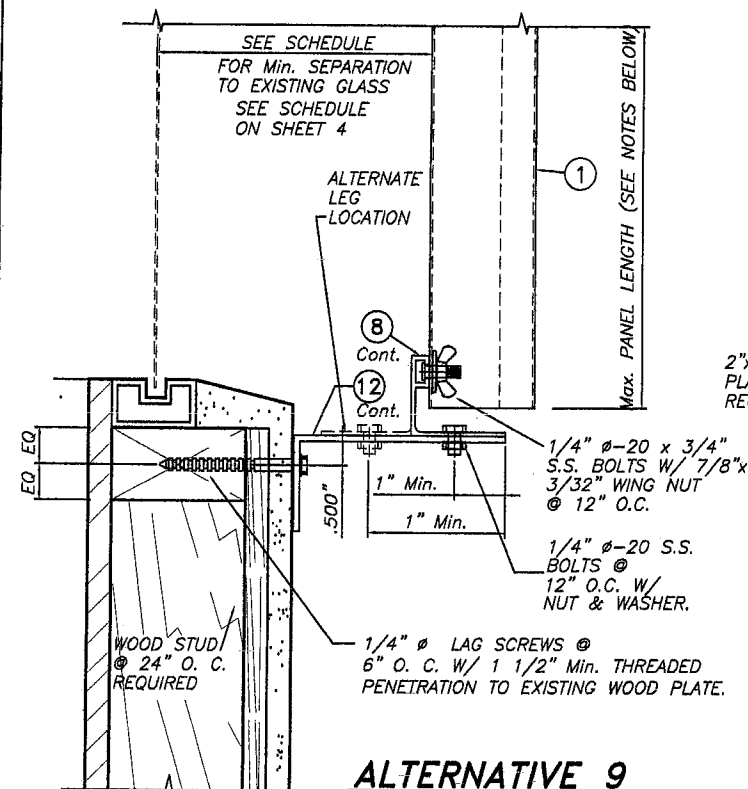


ALTERNATIVE 1

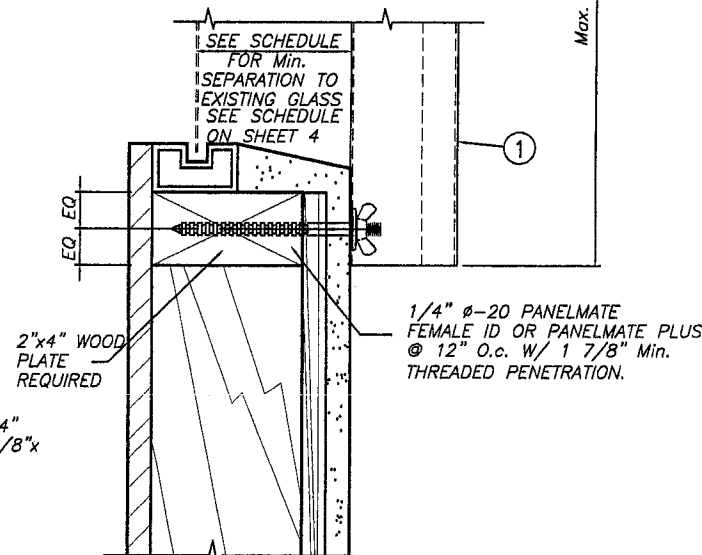


ALTERNATIVE 3

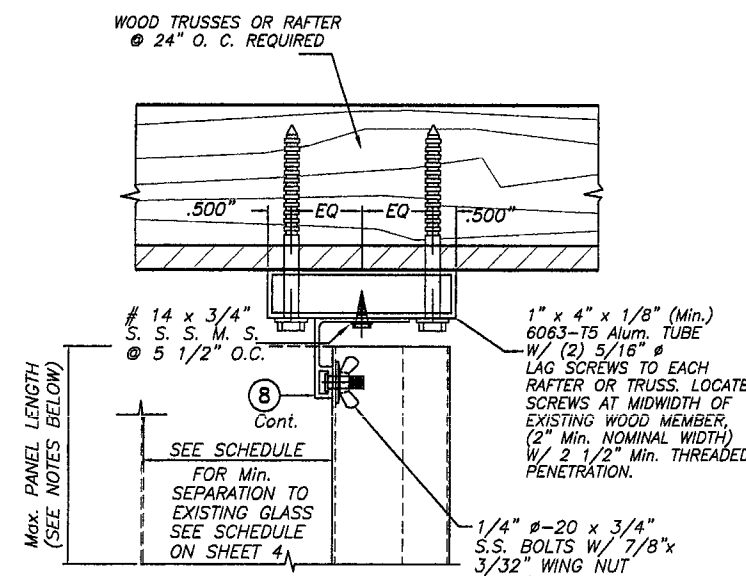
(Max. DESIGN LOAD= ± 61.0 psf
Max. PANEL LENGTH= 8'-0")



ALTERNATIVE 9

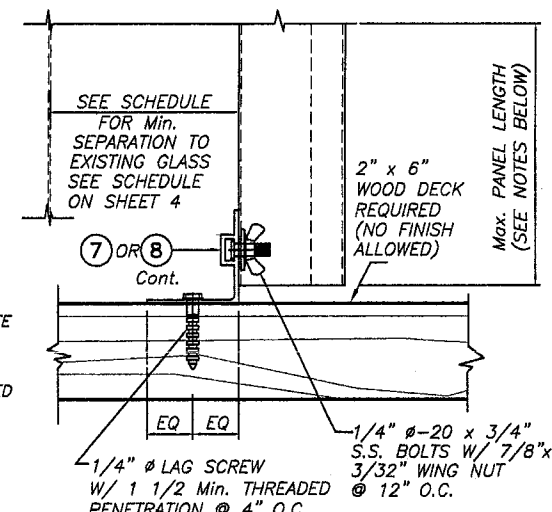


ALTERNATIVE 11



ALTERNATIVE 2

(Max. DESIGN LOAD= ± 61.0 psf
Max. PANEL LENGTH= 8'-0")



ALTERNATIVE 4

NOTE FOR COMBINATION OF SECTIONS:

FLOOR/ WALL/ CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

CEILING & FLOOR MOUNTING INSTALLATIONS

SECTIONS B

SCALE: 1/4" = 1"

WALL MOUNTING INSTALLATIONS

SECTIONS A

SCALE: 1/4" = 1"

INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS

- NOTES:**
1. INSTALLATIONS ARE ONLY VALID FOR DESIGN WIND LOADS AND Max. PANEL LENGTHS AS PER SCHEDULE ON SHEET 4 OF 9, EXCEPT THAT FOR ALTERNATIVES 2 AND 3 A Max. PANEL LENGTH OF 8'-0" AND A Max. DESIGN LOAD OF ± 61.0 PSF SHALL BE USED.
 2. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

MIAMI-DADE COUNTY

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 09-0330-04
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[Signature]
FEB 18 2009
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0.030" THICK GALVANIZED BERTHA
STEEL STORM PANEL

EASTERN METAL SUPPLY, INC.

4268 WESTROADS DR.
WEST PALM BEACH, FL 33407

M.C.V.
DRAWN BY:

02/04/09
DATE

09-013
DRAWING No

SHEET 9 OF 9

REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1	OLD 05-073	2/4/09	3	-	-
2	-	-	4	-	-